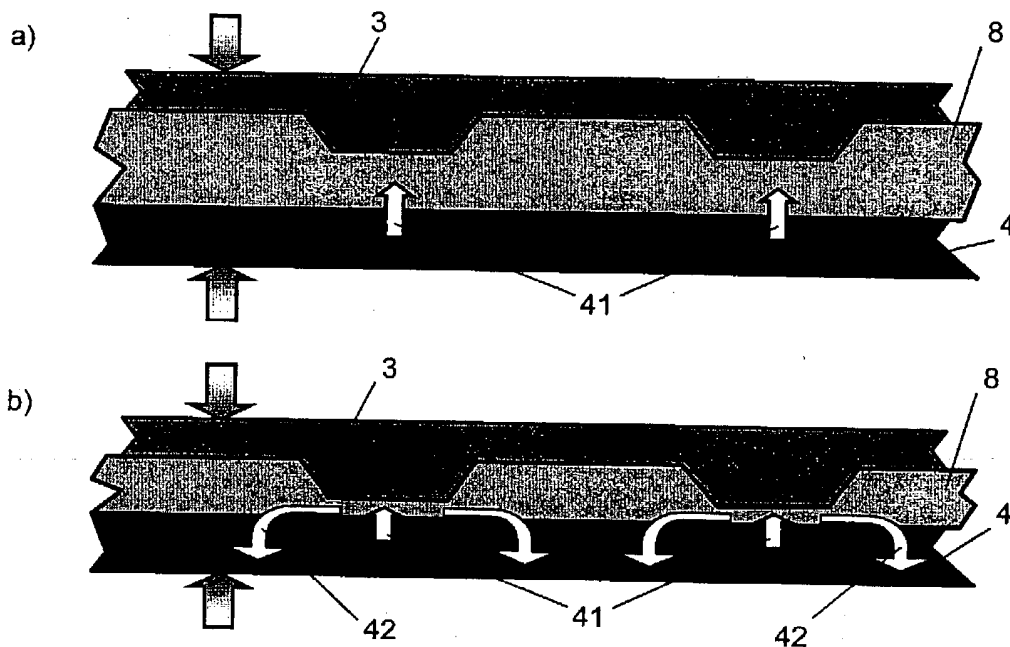


Application No.: 09/831,516
 Amendment dated: July 1, 2004
 Reply to Office Action of May 12, 2004

b.) Remarks

Claims 1-5 are pending in this application. Claims 6-10 are withdrawn from consideration.

With regard to the rejection of Claim 1-5 under 35 U.S.C. 112, first and paragraphs, Applicant explains as follows and refers to two schematic illustrations of the method to supplement the explanation.



As described in the specification, page 6, lines 5-20, during the pressing step the portions of the layer of fibers 8, which are compressed by the protruding elements of the profiling belt 3, acquire a higher sorption capacity as compared to the sorption capacity of the moistening belt 4. Therefore, the capillary absorption pressure forces the moisture (shown as 41) from moistening belt 4 to migrate to the layer of fibers 8, as shown in (a).

As the layer of fibers 8 is further compacted (shown in (b)), mechanical squeezing out of the excess moisture from the compressed portions of the layer of fiber 8 begins.

Application No.:09/831,516
Amendment dated: July 1, 2004
Reply to Office Action of May 12, 2004

The squeezed out excess moisture from the compacted portions first migrates into the non-compacted portions (second areas of the fibrous layer), and only then migrates into the moistening belt under the influence of the capillary absorption forces. That migration flow is shown as 42 in (b).

Therefore, during the compacting step the flow of moisture between the moistening belt and the layer of fibers is facilitated by two independently occurring processes: the capillary adsorption pressure existing because of the different sorption capacities, and mechanical squeezing having nothing to do with the sorption capacity of either the moistening belt or the fibrous layer.

The described difference in the sorption capacities causes the compacted portions of the fibrous layer to become fully saturated with moisture. Closer to the end of the compacting process the excess moisture is mechanically squeezed out. As the squeezed out moisture migrates into the non-compacted portions of the fibrous layer, which are not compacted, the excess water has to be removed from the non-compacted portions. The removal is achieved by providing different sorption capacities of the moistening belt and the fibrous layer, which difference forces the excess moisture to flow from the non-compacted portions to the moistening belt.

The specification describes the above articulated process as follows (page 6, lines 6-16):

In the course of pressing, the sections of fibrous layer that are in the areas of protruding relief elements get compacted, which results in an increase of absorbency of the fibrous layer, due to the increase in the pressure of capillary absorption. When the fibrous layer absorbency reaches a value equal to the value of the same parameter of the moistening belt, the sections of the fibrous layer being compacted begin to absorb water from the moistening belt surface. With further compaction of the fibrous layer the excess water is squeezed out from the compacted sections into the non-compacted sections, and due to the difference in capillary absorption pressures, this water returns to the moistening belt.

In the final Office Action, the Patent Office missed the fact that it is further into the compacting step that the excess water is squeezed out and that the squeezing out step

Application No.: 09/831,516
Amendment dated: July 1, 2004
Reply to Office Action of May 12, 2004

is not associated with capillary absorption forces. The referenced capillary forces relate to the flow of water from the non-compacted portions into the moistening belt having a higher sorption cap, which is consistent with the process and claimed in Claims 1-5. Therefore, withdrawal of the rejection of Claims 1-5 under 35 U.S.C. 112, first and paragraphs, as well as allowance of Claims 1-5, is requested.

With regard to the rejection of Claims 1-5 under 35 U.S.C. 103(a) over WO 85/03962 in view of Dunning (3,949,035) and Appel (4,375,458), Applicant asserts as follows.

Specifically, Applicant draws the attention of the Patent Office to the fact that none of the cited patents discloses selectively moistening the first areas of the layer of fibers by pressing the layer of fibers between the protruding elements of the profiling belt and the moistening belt. In the method claimed in Claim 1 it is sufficient to selectively moist the fibers between the protruding elements and the moistening belt. To achieve selective moistening, the moistening belt is selected to have specific properties, such as "a lower sorption capacity than that of the first areas of the fibrous layer to be impressed by the protruding elements and higher than that of second areas of the fibrous layer that are not to be impressed by the protruding elements". None of the cited patents teaches or suggests or even hints to selective moistening by introducing a moistening belt with the claimed sorption capacity.

To the contrary, Dunning discloses uniform moistening by providing a number of spray nozzles that should partially overlap to achieve a substantially uniform cross-directional water application. (Col. 9, lines 3-11). No sorption capacity properties of the moistening belt are disclosed in Dunning. No such teaching was found in Appel or WO85/03962 either.

Therefore, Applicant respectfully requests that the rejection be withdrawn and independent Claim 1 be allowed.

Claims 2-5 depend off now allowable Claim 1 and therefore are allowable. Allowance of dependent Claims 2-5 is respectfully requested.

Application No.:09/831,516
Amendment dated: July 1, 2004
Reply to Office Action of May 12, 2004

Applicant believes that the present application is in condition for allowance. A Notice of Allowance is respectfully solicited. Should any questions arise, the Examiner is asked to contact the undersigned.

Respectfully submitted,

Houston Eliseeva LLP

By Maria M. Eliseeva
Maria M. Eliseeva
Reg. No.: 43,328

4 Militia Drive, Suite 4
Lexington, Massachusetts 02421
Tel: 781-863-9991
Fax: 781-863-9931

Date: July 1, 2004